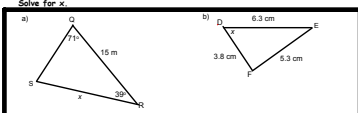


MPM 2D

Name: _____
Date: _____

REALITY CHECK IN POINT!

Here is where you should be with acute triangles:

Solve for x:


What level are you at?
Level 1: _____ Level 2: _____ Level 3: _____ Level 4: _____

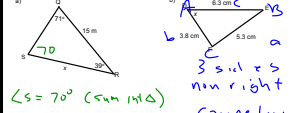
Sep 20-2:13 PM

MPM 2D

Name: _____
Date: _____

REALITY CHECK IN POINT!

Here is where you should be with acute triangles:

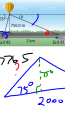
Solve for x:

 $\angle S = 70^\circ$ (sum of angles)
Sin Law
 $\frac{\sin 70^\circ}{15} = \frac{\sin 71^\circ}{x}$
 $x(\sin 70^\circ) = \sin 71^\circ (15)$
 $x = \frac{(0.9455)(15)}{0.9397}$
 $x = 15.1$
 $a^2 = b^2 + c^2 - 2bc \cos A$
 $5.2^2 = 6.3^2 + 3.8^2 - 2(6.3)(3.8) \cos A$
 $28.96 = 39.49 + 14.44 - 47.88 \cos A$
 $-47.88 \cos A = -22.09$
 $0.5439 = \cos A$
 $\cos^{-1}(0.5439) = A$

What level are you at?
Level 1: _____ Level 2: _____ Level 3: _____ Level 4: _____

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8.5 Solving Acute Angle Triangles

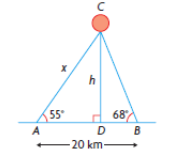
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 $\sin 75^\circ(x) = \sin 70^\circ(15)$
 $\sin 75^\circ x = 1(750)$
 $x = \frac{750}{\sin 75^\circ}$
 $x = \frac{750}{0.9659}$
 $x = 776.5$
 $b^2 = 776.5^2 + 2000^2 - 2(776.5)(2000) \cos 75^\circ$
 $b^2 = 6023275.25 - (3160000) \cos 75^\circ$
 $b^2 = 4602952.25 - (3160000)(0.2598)$
 $b^2 = 4602952.25 - 809932.3$
 $b^2 = 3793020.0$
 $b = 1947.6$
 $\sin 75^\circ = \frac{h}{1947.6}$
 $h = 1947.6 \sin 75^\circ$
 $h = 1947.6(0.9659)$
 $h = 1881.1$

Jun 3-7:59 AM

EXAMPLE 3 Solving a problem using acute and right triangles

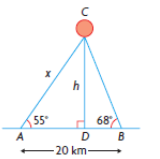
A weather balloon is directly between two tracking stations. The angles of elevation from the two tracking stations are 55° and 68° . If the tracking stations are 20 km apart, determine the altitude of the weather balloon.

Marnie's Solution


Jun 3-9:29 AM

EXAMPLE 3 Solving a problem using acute and right triangles

A weather balloon is directly between two tracking stations. The angles of elevation from the two tracking stations are 55° and 68° . If the tracking stations are 20 km apart, determine the altitude of the weather balloon.

Marnie's Solution

 $\frac{\sin 57}{20} = \frac{\sin 69}{b}$
 $22.1 = \frac{b \sin 69}{\sin 57}$
 $b = 18.1$

Jun 3-9:29 AM

Homework

Pg. 449 # 1, 3, 5, 7, 8, 12, 13

Jun 3-9:25 AM